

|----- A helix -----| |----- C helix -----|

SWMb **VL**-----**SEGEWQIVLHVWAKVEADVA**-----**GHGQDILIRLEKSHPETLEK** 42
HemAT-Hs **MSNNDTLVTADVRNGIDCHALADRIQLDE**--**AETAWRLSETGLDDDTMAALAAEOPLEAT** 60
HemAT-Bs **HEFRKQRKQETAFSDSNGQOKN-RIQLTNKHADVKKQLKVVVRUGDAELVLEQLQPLIQEN** 61

| D helix | |----- E helix -----| |----- F helix -----|

SWMb -----**EDRSKILKQFAEMKASEDLKKHGVTVL**--**TALCALKK-KCHHEAE**-----**LKPLAQS** 92
HemAT-Hs **ADALVTDE**--**YDHLESYERTODLEANSTRTVEQLKETQAEYLLGLGRGEYDTEYAAQRARIGKI** 122
HemAT-Bs **IVNIVDAS**--**YRNLDHSSSMQDI-NDESSVDRLLKQTKRHLOEMFAGVTDDEETEKRNRIASI** 122

|----- G helix -----| |----- H helix -----|

SWMb **HATKHKPEIKYLEFISEALIEVLHSRHPGDEGADAQCAMNKAL****ELERKDIAA-KYKE****LGYOQ** 153
HemAT-Hs **BDVIGLGEDVYLGAITRYITGLLDALADDVADRGEAAAAVD****ELVARELEMLKILTEDQOI** 184
HemAT-Bs **HLRGLPKWTMGAPQELLISMDIY**-----**EASITNOQELLKAIKATTKRLNLEQOL** 175

SWMb SEQ. ID. No. 76
HemAT-Hs SEQ. ID. No. 77
HemAT-Bs SEQ. ID. No. 78

a

K1
** ** *

Tsr **LMRTVGDVRNCANALYS****CASEIATGNNDTSSTEQ****QAASLEETAASMEOLTATVKQNAENAR** 324
HemAT-Hs **LEATSQDVAERTDTMRARTDDQVDRMADVSREISSVSASVEEVASTADDVRRTS****SEDAEALAO** 283
HemAT-Bs **LHOKIQETSGSIANLESETSRSVQELVDKSEGISQASKAGTVTSSTVEEKSIGCKKLEVOO** 259

HCD

Tsr **QASHLALSASETAORGCKVVDNVVQTMRDISTSSOKIADITSVIDGIAFQTNLLALNAAVEA** 386
HemAT-Hs **QGEAAADDALATMTDIDEATDGVTAGVEQLGERAADVESVTGVIDDIAEQTNLLALNASTEA** 345
HemAT-Bs **K-----QMNKIDTSLVQIEKEMVKLDEIAQQIEKIEGLVTGIAEQTNLLSLNASTES** 311

HCD

Tsr **ARAGEQGRGFAVVAGEVRNLAORSAQAAREIKSLTESVGVKVDVGSTLVESAGETMAEIVSA** 448
HemAT-Hs **ARAGEACEGFAVVADEVKALAEPSREQSTRVEELVEQMQAETEETVDQOLDEVNORIGEGVER** 407
HemAT-Bs **ARAGEHCKGFAVVANEVRKLS****EDTKKTVSTVSELV**-----**NNNTNTQINIVSKHIKQVNEL** 366

R1
**

Tsr **VTRVTDIMGEIASASDEQSRGIDQVGLVAEMDRVTOQNAALVEESAAAAALEEQASRLTE** 510
HemAT-Hs **VEEAMETLQEIITDAVEDAASCMQEVSTATDEQAVSTEEVAEMVDGVDDRAGETAAALDDIAD** 469
HemAT-Bs **VSESKEKMTQINRLEDELVEHSMKISKEQSGKIDVPLQAPLGGLOEVSRAVSHVAASVDSLVI** 428

Tsr **AVAVFRIQOQORETS****AVVKTVTAPAP** SEQ. ID. No. 79 536
HemAT-Hs **AT-----DQQVRTVEEVRET****VGKLS** SEQ. ID. No. 80 489
HemAT-Bs **LT-----EE** SEQ. ID. No. 81 432

b

FIGURE 1

1 2 1' 2'

118

86

HemAT-Hs

b

FIGURE 2

Myoglobin-like Protein (MbLP)

GQDVLVVLIKXHPLIQEKIXXFDFFKH

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

AQRXRLAQIHAXKGKIPDWYL

M1-box

SEQ. ID. No. 82

M2-box

SEQ. ID. No. 83

TEMPLATE

IIKXTVPVLXEHGXII

GQDVLVVLIKXNPEIQEKFFFFKH

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

AQRXRLAQIHAXKGKIPDWYL

H-box

SEQ. ID. No. 84

M1-box

SEQ. ID. No. 85

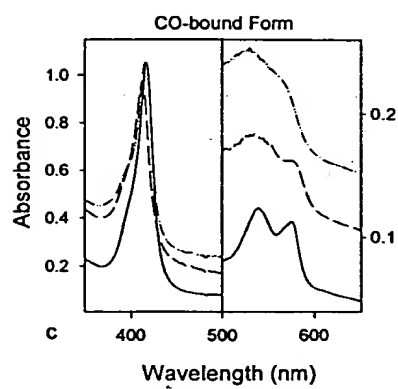
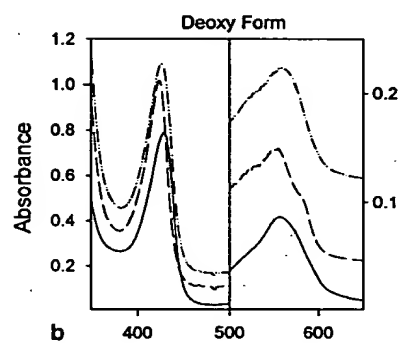
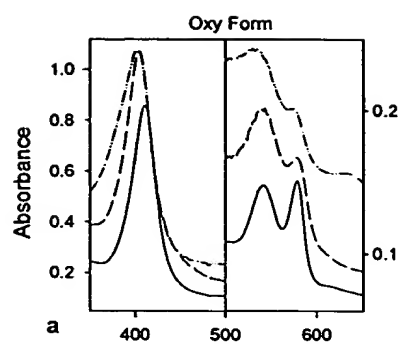
M2-box

SEQ. ID. No. 86

Figure 1 The two sequences used in the analyses. M1 and M2 are the site of myoglobin recognition. M2 is the site of HemAT recognition. The H-box is the site primarily of microbial hemoglobin recognition.

FIGURE 3

200455926-120609



--- HemAT-Hs
-.- HemAT-Bs
— Mb

FIGURE 4

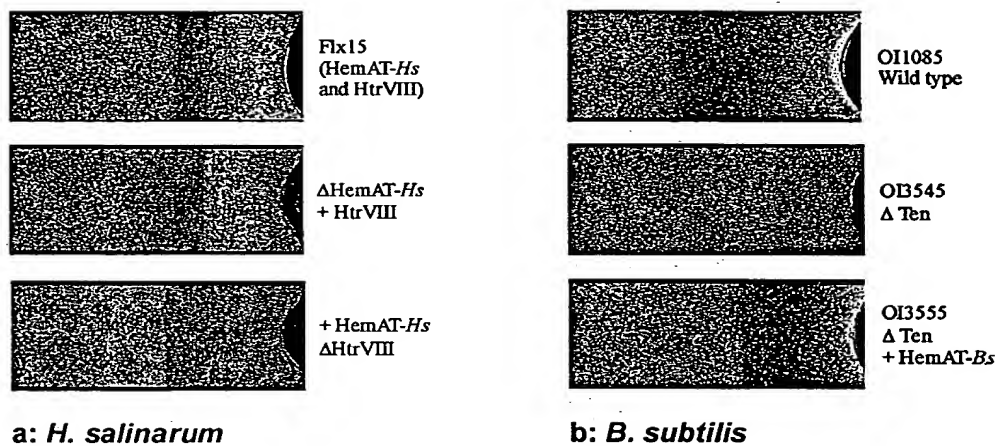


FIGURE 5

669027 84655460

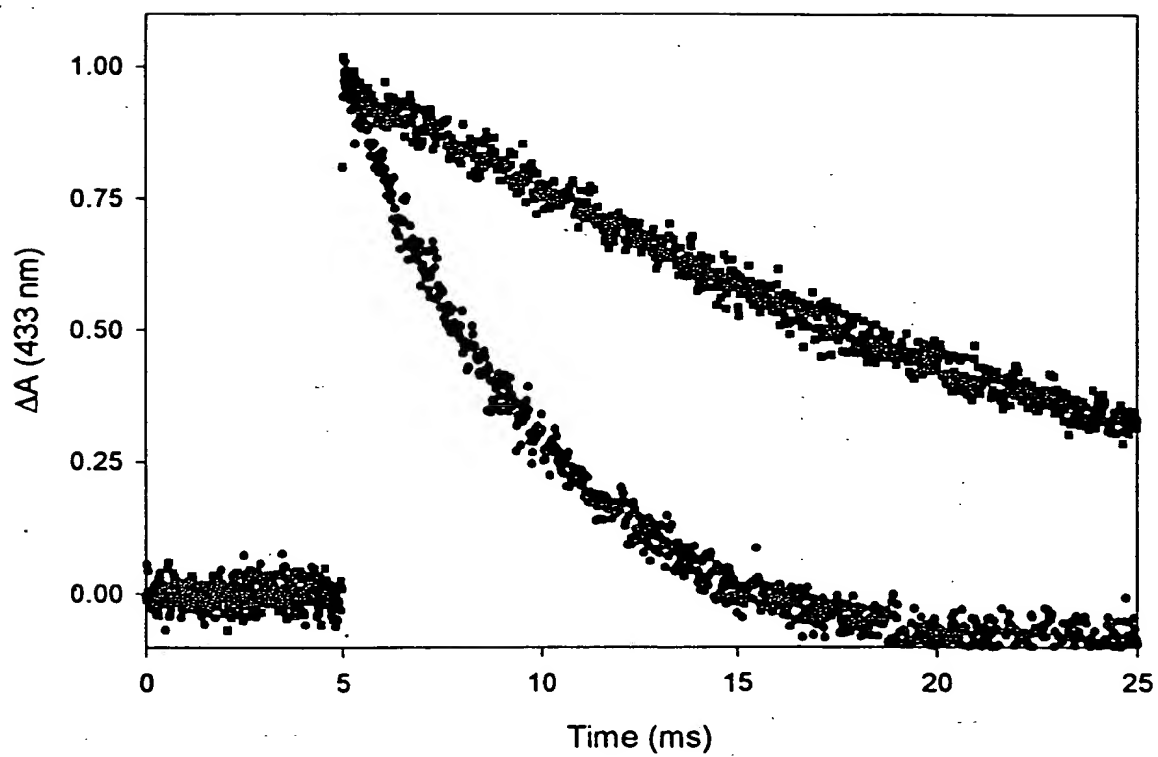


FIGURE 6

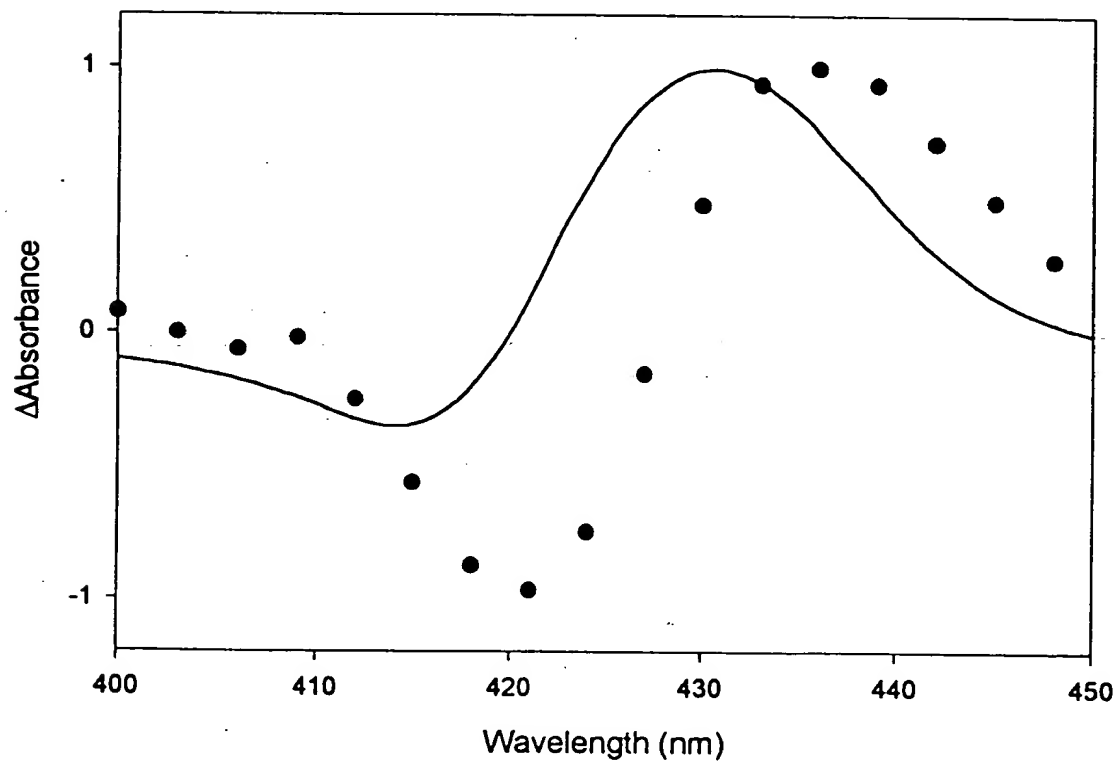
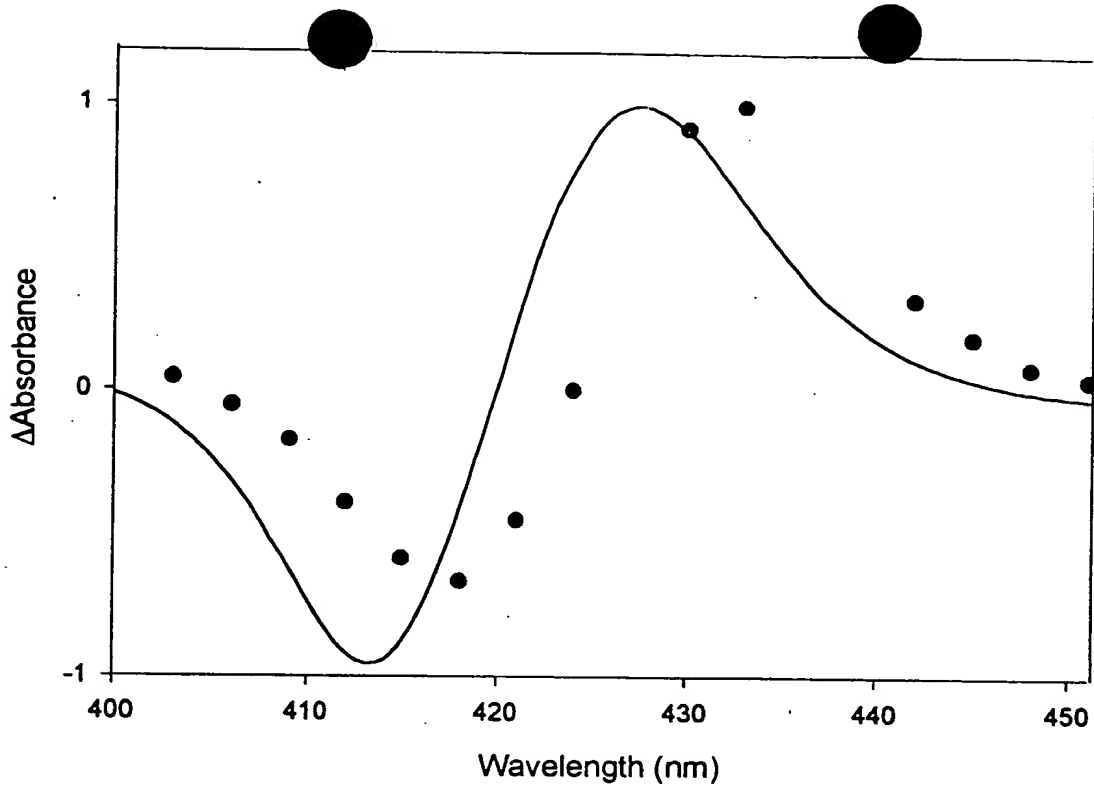


FIGURE 7

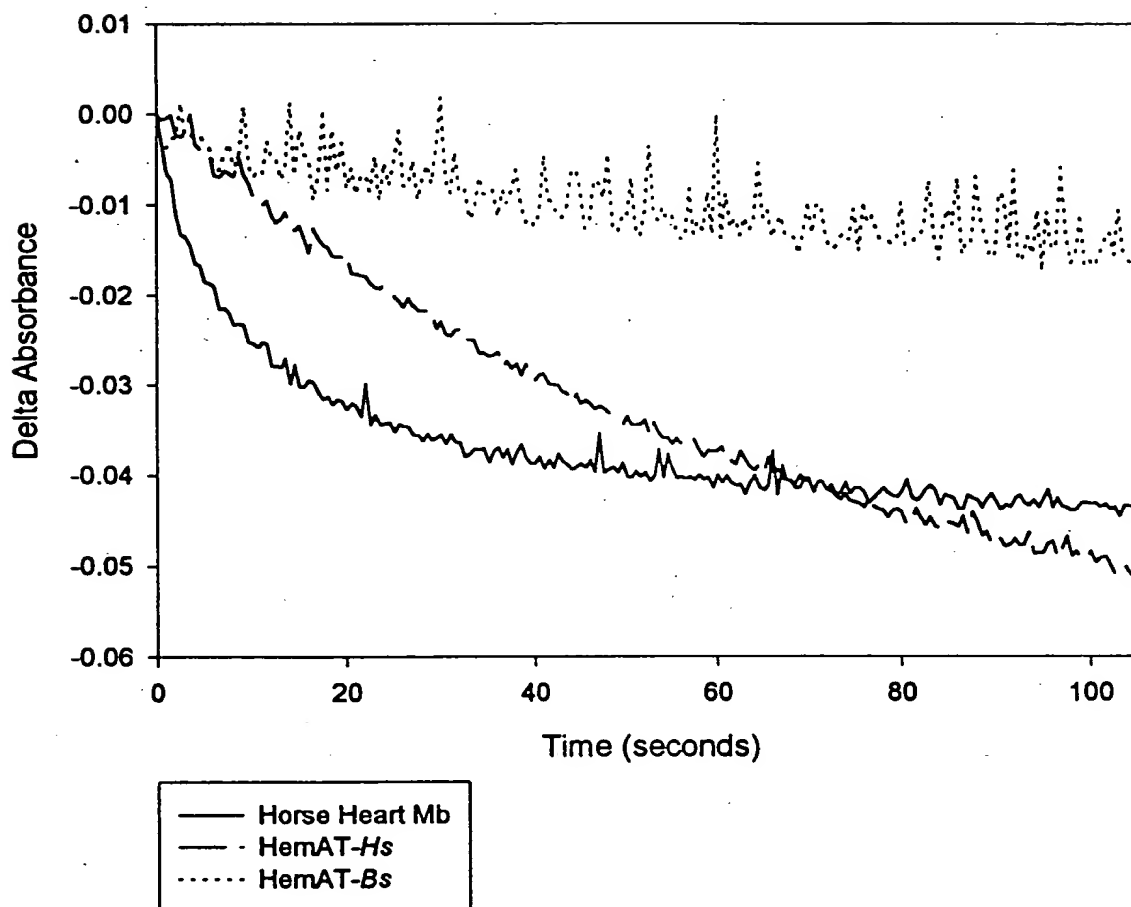


FIGURE 8